CLAIMS

What is claimed is:

1. A method for auto-configuring a Permanent Virtual Circuit (PVC) of a customer premises equipment device over an Asynchronous Transfer Mode (ATM) network, said method comprising:

receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

checking said plurality of ATM cells for an Operation and Maintenance (OAM) cell, said OAM cell allowing the PVC to be auto-configured by obtaining a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI) from said OAM cell;

configuring the PVC by obtaining said VPI and said VCI from a first ATM cell; and

linking the PVC to a protocol, said protocol being applicable to DSL.

2. A method in accordance with claim 1 wherein said ATM cell further includes a header and a payload, said header comprising a VPI and a VCI.

3. A method in accordance with claim 1 wherein said OAM cell is used for exchanging control and maintaining the ATM network running.

4. A method in accordance with claim 1 wherein said first ATM cell is determined by measuring an elapse time of at least 800 ms between a previous ATM cell and said first ATM cell.

5. A method in accordance with claim 1 wherein said protocol further includes Point-to-Point Protocol (PPP) interface or Request-For-Comments (RFC) 1483 bridge interface.

6. A method in accordance with claim 1 further comprising receiving a plurality of messages from an aggregate router, said plurality of messages being a plurality of Link Control Protocol (LCP) configuration requests or a plurality of Bridge Protocol Data Unit (BPDU) spanning tree messages.

7. A method in accordance with claim 1 wherein said linking further includes configuring a Dynamic Host Configuration Protocol (DHCP) or an IPCP configuration once said configured PVC is linked to a PPP module or a bridging module.

8. An Asynchronous Transfer Mode (ATM) communications system comprising:

a digital subscriber line access module receiving said plurality of ATM cells; and

a customer premises equipment device having a mechanism which auto-configures a Permanent Virtual Circuit (PVC), said mechanism receiving an ATM cell, said mechanism checking said ATM cell for an Operation and Maintenance (OAM) cell, said OAM cell allowing configuring said PVC by reading a Virtual Path Identifier (VPI) and a Virtual Channel Identifier (VCI) from said OAM, said mechanism linking said PVC to a Point-to-Point Protocol interface or an RFC 1483 bridge interface.

9. An Asynchronous Transfer Mode communications system in accordance with claim 8 wherein said ATM cell further includes a header and a payload, said header comprising said VPI and said VCI.

10. An Asynchronous Transfer Mode communications system in accordance with claim 8 wherein said OAM cell is used for exchanging control and maintaining said ATM communication system.

11. An Asynchronous Transfer Mode communications system in accordance with claim 8 wherein said PVC is configured by obtaining said VPI and said VCI from a first ATM cell, said first ATM cell determined by measuring an elapse time of at least 800ms between a previous ATM cell and said first ATM cell.

12. An Asynchronous Transfer Mode communications system in accordance with claim 8 wherein said customer premises equipment device further receives a plurality of messages from an aggregate router, said plurality of messages being a plurality of Link Control Protocol configuration requests or a plurality of Bridge Protocol Data Unit (BPDU) spanning tree messages.

13. A CPE device coupled to an ATM network comprising:

means for receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

means for checking said plurality of ATM cells for an OAM cell, said OAM cell allowing configuring said PVC by reading a VPI and a VCI from said OAM cell;

means for configuring said PVC by reading said VPI and said VCI from a first ATM cell; and

means for linking the PVC to a protocol, said protocol being applicable to DSL.

14. A device in accordance with claim 13 wherein said first ATM cell is determined by measuring an elapse time of at least 800 ms between a previous ATM cell and said first ATM cell.

15. A program storage device readable by a machine, embodying a program of instructions, executable by the machine to perform a method for auto-configuring a Permanent Virtual Circuit (PVC) of a customer premises equipment device over an Asynchronous Transfer Mode (ATM) network, said method comprising:

receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

checking said plurality of ATM cells for an Operation and Maintenance (OAM) cell, said OAM cell allowing the PVC to auto-configure by obtaining a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI) from said OAM cell;

configuring the PVC by obtaining said VPI and said VCI from a first ATM cell; and

linking the PVC to a protocol, said protocol being applicable to DSL.

16. A program storage device in accordance with claim 15 wherein said OAM cell is used for exchanging control and maintaining the ATM network running.

17. A program storage device in accordance with claim 15 wherein said first ATM cell is determined by measuring an elapse time of at least 800 ms between a previous ATM cell and said first ATM cell.

18. A program storage device in accordance with claim 15 wherein said protocol further includes Point-to-Point Protocol (PPP) interface or Request-For-Comments (RFC) 1483 bridge interface.

19. A program storage device in accordance with claim 15 further comprising receiving a plurality of messages from an aggregate router, said plurality of messages being a plurality of Link Control Protocol (LCP) configuration requests or a plurality of Bridge Protocol Data Unit (BPDU) spanning tree messages.

20. A program storage device in accordance with claim 15 wherein said linking further includes configuring a Dynamic Host Configuration Protocol (DHCP) or an IPCP configuration once said configured PVC is linked to a PPP module or a bridging module.